AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-25 (canceled)

Claim 26 (withdrawn): The method of claim 25, wherein the provision of the at least one Chlamydia psittaci antigen comprises:

(a) preparing a cloned expression library from fragmented genomic DNA, cDNA or sequenced genes of Chlamydia psittaci;

(b) administering at least one clone of the library in a pharmaceutically acceptable carrier into the animal, wherein the at least one clone encodes the at least one Chlamydia psittaci antigen; and

(c) expressing the at least one Chlamydia psittaci antigen, in the animal.

Claim 27 (withdrawn): The method of claim 76, wherein, in addition to the at least one clone, the expression library comprises at least one or more additional clone having a sequence of SEQ ID NO:6, SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 14, SEQ ID NO: 16, SEQ ID NO: 18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:24, SEQ ID NO:26, SEQ ID NO:28, SEQ ID NO:30, SEQ ID NO:32, SEQ ID NO:34, SEQ ID NO:36, SEQ ID NO:38, SEQ ID NO:40, SEQ ID NO:42, SEQ ID NO:44, SEQ ID NO:46, SEQ ID NO:48, SEQ ID NO:50, SEQ ID NO:52, SEQ ID NO:54, SEQ ID NO:56, SEQ ID NO:58, or SEQ ID NO:60, or fragment thereof.

Claim 28 (canceled)

Claim 29 (withdrawn): The method of claim 26, wherein the at least one clone is administered by an intramuscular injection or epidermal injection.

Claim 30 (withdrawn): The method of claim 29, wherein the intramuscular injection is at least 1.0 ug to 200 ug of nucleic acid from the cloned expression library.

Claim 31 (withdrawn): The method of claim 29, wherein a second intramuscular injection of epidermal injection is administered at least about three weeks after the first injection.

Claim 32 (withdrawn): The method of claim 25, wherein the provision of the Chlamydia psittaci antigen(s) comprises:

(a) obtaining at least one polynucleotide having a sequence encoding a Chlamydia psittaci antigen;

(b) administering the polynucleotide to the animal; and

(c) expressing the one or more Chlamydia psittaci antigen in the animal.

Claim 33 (withdrawn): The method of claim 78, wherein the at least one Chlamydia psittaci antigen has a sequence of SEQ ID NO:7 or an antigenic fragment thereof.

Claim 34 (withdrawn): The method of claim 78, further comprising administering to the animal at least a second polynucleotide encoding a second Chlamydia psittaci antigen.

Claim 35 (withdrawn): The method of claim 34, wherein the second polynucleotide is further defined as encoding a second Chlamydia psittaci antigen having a sequence of SEQ ID NO: 11, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, SEQ ID NO:23, SEQ ID NO:25, SEQ ID NO:27, SEQ ID NO:29, SEQ ID NO:31, SEQ ID NO:33, SEQ ID NO:35, SEQ ID NO:37, SEQ ID NO:39, SEQ ID NO:41, SEQ ID NO:43, SEQ ID NO:45, SEQ ID NO:47, SEQ ID

NO:49, SEQ ID NO:51, SEQ ID NO:53, SEQ ID NO:55, SEQ ID NO:57, SEQ ID NO:59, SEQ ID NO:61, or an antigenic fragment thereof.

Claim 36 (withdrawn): The method of claim 32, wherein the polynucleotide is administered by a first intramuscular injection or epidermal injection.

Claim 37 (withdrawn): The method of claim 36, wherein the polynucleotide is administered by a second intramuscular injection or epidermal injection.

Claim 38 (withdrawn): The method of claim 37, wherein the intramuscular injection is at least 1.0 ug to 200 ug of the polynucleotide.

Claims 39-49 (canceled)

Claim 50 (withdrawn): The method of claim 25, further comprising administering to the animal an antigen from a Chlamydia species other than Chlamydia psittaci.

Claim 51 (withdrawn): The method of claim 25, further comprising administering to the animal an antigen from a non-Chlamydia species.

Claim 52 (withdrawn): A method of obtaining polynucleotide sequences effective for generating an immune response against the genus Chlamydia in an animal comprising:

(a) preparing a cloned expression library from a fragmented genomic DNA of the genus Chlamydia;

(b) administering one or more clones of the library in a pharmaceutically acceptable carrier into the animal in an amount effective to induce an immune response; and

(c) selecting from the library the polynucleotide sequences that induce an immune response,

Wherein the immune response in the animal is protective against Chlamydia infection.

Claim 53 (withdrawn): The method of claim 52, further comprising testing the animal for immune resistance against a Chlamydia bacterial infection by challenging the animal with Chlamydia.

Claim 54 (withdrawn): The method of claim 52, wherein the genomic DNA is fragmented physically or by restriction enzymes.

Claim 55 (withdrawn): The method of claim 54, wherein the fragments are, on average, about 200-1000 base pairs in length.

Claim 56 (withdrawn): The method of claim 52, wherein each clone in the library comprises a gene encoding a mouse ubiquitin fusion polypeptide designed to line the expression library polynucleotides to the ubiquitin gene.

Claim 57 (withdrawn): The method of claim 52, wherein the library is about $1x10^3$ to about $1x10^6$ clones.

Claim 58 (withdrawn): The method of claim 57, wherein the library is $1x10^5$ clones.

Claim 59 (withdrawn): The method of claim 52, wherein about 0.01 ug to about 200 ug of DNA, cDNA or sequenced gene from the clones is administered into the animal.

Claim 60 (withdrawn): The method of claim 59, wherein the genomic DNA, cDNA or sequenced gene is introduced by intramuscular injection or epidermal injection.

Claim 61 (withdrawn): The method of claim 52, wherein the fragmented genomic DNA, cDNA or sequenced genes of Chlamydia further comprises a promoter operably linked to the DNA that permits expression in a vertebrate animal cell.

Claims 62-73 (canceled)

Claim 74 (previously presented): The method claim 25, wherein the Chlamydia psittaci antigen is further defined as having a sequence of SEQ ID NO:9.

Claim 75 (canceled)

Claim 76 (withdrawn): The method of claim 26, wherein the at least one clone, has a sequence of SEQ ID NO:8 or fragment thereof.

Claim 77 (withdrawn): The method of claim 76, wherein the at least one clone comprising a nucleic acid sequence of SEQ ID NO:8 or a fragment thereof is further defined as comprising a nucleic acid sequence of SEQ ID NO:6 or a fragment thereof.

Claim 78 (withdrawn): The method of claim 32, wherein the provision of the Chlamydia psittaci antigen(s) is further defined as further comprising:

(a) obtaining at least one polynucleotide having a sequence encoding an antigen having a sequence of SEQ ID NO:9 or an antigenic fragment thereof comprising at least 25 contiguous amino acid residues of SEQ ID NO:9;

(b) administering the polynucleotide to the animal; and

(c) expressing the one or more Chlamydia psittaci antigen having a sequence of SEQ ID NO:9 or an antigenic fragment thereof in the animal.

Claim 79 (withdrawn): The method of claim 78, wherein the polynucleotide having a sequence encoding an antigen having a sequence of SEQ ID NO:9 or antigenic fragment thereof has a sequence of SEQ ID NO:8 or fragment thereof.

Claim 80 (withdrawn): The method of claim 33, wherein the polynucleotide having a sequence encoding an antigen having a sequence of SEQ ID NO:7 or antigenic fragment thereof is further defined as having a sequence of SEQ ID NO:6 or fragment thereof.

Claim 81 (withdrawn): The method of claim 35, wherein the second polynucleotide has a sequence of SEQ ID NO:10, SEQ ID NO:12, SEQ ID NO:14, SEQ ID NO:16, SEQ ID NO:18, SEQ ID NO:20, SEQ ID NO:22, SEQ ID NO:24, SEQ ID NO:26, SEQ ID NO:28, SEQ ID NO:30, SEQ ID NO:32, SEQ ID NO:34, SEQ ID NO:36, SEQ ID NO:38, SEQ ID NO:40, SEQ ID NO:42, SEQ ID NO:44, SEQ ID NO:46, SEQ ID NO:48, SEQ ID NO:50, SEQ ID NO:52, SEQ ID NO:54, SEQ ID NO:56, SEQ ID NO:58, SEQ ID NO:60, or fragment thereof.

Claims 82-91 (canceled)

Claim 92 (currently amended): A method of immunizing an animal comprising the steps of:

~~preparing a Chlamydia psittaci antigen; and~~

administering ~~the~~ a Chlamydia psittaci antigen to an animal in an amount effective to induce an immune response against Chlamydia psittaci; wherein the

Chlamydia psittaci antigen comprises the amino acid sequence as set forth as SEQ ID NO:9.

Claim 93 (previously presented): The method of claim 92, wherein the Chlamydia psittaci antigen comprises the amino acid sequence as set forth as SEQ ID NO:7.

Claim 94 (currently amended): The method of claim 92, wherein the method further comprises the steps of:

~~preparing a second Chlamydia psittaci antigen; and~~

administering ~~the~~ a second Chlamydia psittaci antigen to an animal in an amount effective to induce an immune response against Chlamydia psittaci; wherein the second Chlamydia psittaci antigen comprises the amino acid sequence as set forth as SEQ ID NO: 7, 11, 13, 17, 23, or 27.

Claim 95 (currently amended): The method of claim 93, wherein the method further comprises the steps of:

~~preparing a second Chlamydia psittaci antigen; and~~

administering ~~the~~ a second Chlamydia psittaci antigen to an animal in an amount effective to induce an immune response against Chlamydia psittaci; wherein the second Chlamydia psittaci antigen comprises the amino acid sequence as set forth as SEQ ID NO: 11, 13, 17, 23 or 27.

Claims 96-103 (canceled)

Claim 104 (previously presented): The method of claim 92 wherein the step of preparing a Chlamydia psittaci antigen further comprises preparing the Chlamydia psittaci antigen in a pharmaceutically acceptable carrier.

Claim 105 (previously presented): The method of claim 94 wherein the steps of preparing a Chlamydia psittaci antigen and preparing a second Chlamydia psittaci antigen further comprises preparing the Chlamydia psittaci antigen and the second Chlamydia psittaci antigen in a pharmaceutically acceptable carrier.

Claim 106 (previously presented): The method of claim 95 wherein the steps of preparing a Chlamydia psittaci antigen and preparing a second Chlamydia psittaci antigen further comprises preparing the Chlamydia psittaci antigen and the second Chlamydia psittaci antigen in a pharmaceutically acceptable carrier.

Claim 107 (previously presented): The method of claim 92 wherein the animal is a bovine.

Claim 108 (previously presented): The method of claim 94 wherein the animal is a bovine.

Claim 109 (previously presented): The method of claim 95 wherein the animal is a bovine.

Claim 110 (previously presented): The method of claim 92 wherein the animal is a human.

Claim 111 (previously presented): The method of claim 94 wherein the animal is a human.

Claim 112 (previously presented): The method of claim 95 wherein the animal is a human.

Claim 113 (previously presented): The method of claim 92 wherein the animal is a mammal.

Claim 114 (previously presented): The method of claim 94 wherein the animal is a mammal.

Claim 115 (previously presented): The method of claim 95 wherein the animal is a mammal.

Claim 116 (new): The method of claim 94 wherein the step of administering the second Chlamydia psittaci antigen comprises administering the second antigen simultaneously with the administration of the first antigen.

Claim 117 (new): The method of claim 94 wherein the step of administering the second Chlamydia psittaci antigen comprises administering the second antigen subsequent to the administration of the first antigen.

Claim 118 (new): The method of claim 94 wherein the step of administering the second Chlamydia psittaci antigen comprises administering the second antigen prior to administration of the first antigen.

Claim 119 (new): The method of claim 95 wherein the step of administering the second Chlamydia psittaci antigen comprises administering the second antigen simultaneously with the administration of the first antigen.

Claim 120 (new): The method of claim 95 wherein the step of administering the second Chlamydia psittaci antigen comprises administering the second antigen subsequent to the administration of the first antigen.

Claim 121 (new): The method of claim 95 wherein the step of administering the second Chlamydia psittaci antigen comprises administering the second antigen prior to administration of the first antigen.

SUMMARY OF THE INTERVIEW

On October 17, 2006, an interview was conducted between Examiners Ford and Minnifield and applicants' attorney, Aaron Olejniczak.

Claims 92-115 were discussed extensively. Also discussed was a poster presented by Dr. Kaltenboeck from the FASEB meeting of May 12-16, 2000. A true and correct copy of that poster is submitted in the Information Disclosure Statement filed herewith.

Several amendments were discussed, particularly an amendment to independent claim 92 was discussed wherein the step of preparing a Chlamydia psittaci antigen was eliminated. Initially, amendments to claims 94 and 95 were suggested to describe the timing of the administration of the second antigen. As an alternative, dependent claims depending on claims 94 and 95 delineating time for administration of the second antigen were discussed.

Claims 96-103 were discussed relative to a rejection under 35 U.S.C. § 112, ¶1, for enablement. The Examiners confirmed that claims 92-95 and claims 104-115 are not technically rejected under 35 U.S.C. § 112 for enablement. Instead, the enablement rejection applies specifically to claims 96-103 which describe either variants or fragments of particular sequence ID numbers. Applicant argued that there is sufficient disclosure in the application to inform one of ordinary skill in the art to identify variants or fragments that would elicit an immune response. The Examiners countered that while there is a general teaching, there was not a teaching on how to choose particular fragments, nor an identification of particular fragments that are effective in eliciting the immune response. Moreover, the Examiners indicated that the rejection under 35 U.S.C. § 112, ¶2, also had a bearing on the "variant" and "fragment" language. The Examiners indicated that in addition to particular variants or fragments not being enabled, the claims are not definite in the structure and function as to which of the possibly expediential number of fragments or variants would be included in the claims.

Applicants' attorney and the Examiners also discussed the new matter rejection in claims 92-115. The Examiners clarified that technically, the rejection applies

only to the claims with amended language in them, i.e., claims 96-103. Applicants' attorney indicated that the additional language was to clarify what a protective immune response is. The Examiners responded that if that is the case, the language is probably unneeded.

The parties also discussed how the proposed amendment to claim 92 would obviate the rejections in paragraphs 8 and 13 of the Office Action as the step of preparation would be eliminated. The parties further discussed the rejections under 35 U.S.C. § 112, second paragraph, regarding timing of the administration of the second antigen relative to the first antigen. Applicants' attorney respectfully asserted that the timing of the administration of the second antigen is not essential to the method and, therefore, suggested supplying dependent claims on the timing of the administration of the second antigen.

Finally, the parties discussed the Kaltenboeck poster; however, the fax copy that applicants' attorney supplied to the Examiners was insufficient for the Examiners to read a substantial portion. Accordingly, applicants' attorney is supplying a clear copy of the post in conjunction with this response via an Information Disclosure Statement.

No resolution was reached as to allowable subject matter. However, the parties agreed that applicants' attorney would submit suggested amendments and further consideration to the various arguments set forth in the interview would be further considered upon the Examiners' review of such amendment.